COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Federal-Mogul Corporation
Winchester, Frederick County, Virginia
Permit No. VRO80430

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Federal-Mogul Corporation, Federal-Mogul Friction Products has applied for a renewal of the Title V Operating Permit for its brake part manufacturing facility in Winchester, Virginia. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date: *3/8/05*

Air Permit Manager:_____ Date: *3/8/05*

Deputy Regional Director:_____Date: *3/8/05*

.

FACILITY INFORMATION

Permittee
Federal-Mogul Corporation
Federal-Mogul Friction Products
P.O. Box 3250
Winchester, VA 22604

Facility
Federal-Mogul Friction Products
2410 Papermill Road
Winchester, VA 22601

NET Identification Number: 51-840-0001

SOURCE DESCRIPTION

SIC Code: 3714 - Manufacture of brake shoes and pads

Federal-Mogul Friction Products (Federal-Mogul), a subsidiary of Federal-Mogul Corporation, manufactures automobile and truck brake friction products at the Winchester plant. The production processes at the facility include dry production processes and a wet (organic solvent based carrier) process. Both manufacturing processes can be divided into the following steps:

Compounding - Raw materials are received in bags, totes, or drums, and are mixed in this area to produce various brake formulations. The formulations are then transferred to the preform area.

Preforming - The brake compound is pressed under pressure and heated in preform presses, cure presses, and cure ovens to form the solid brake component.

Finishing - The brake components are ground to final tolerances at grinding stations. Coatings may also be applied and customer information is printed onto the brake.

Air pollution from the facility includes particulate matter from brake compound transfer and mixing and brake finishing (grinders, drills, saws); volatile organic compound and hazardous air pollutant emissions from wet brake compound carrier solvent evaporation, resin decomposition in presses and curing ovens, and paint, adhesive, and cleaning solvent evaporation. There are also small amounts of natural gas combustion product emissions.

The facility is a Title V major source of volatile organic compounds and hazardous air pollutants. This source is located in a recently designated nonattainment area for ozone which is under an Early

Action Compact. The facility is located in an attainment area for all other pollutants, and is a PSD major source. Portions of the facility are permitted under minor new source review permits issued on December 12, 1974, February 6, 1979 and December 22, 2004.

CHANGES TO EXISTING TITLE V PERMIT

A Title V permit renewal application was submitted by Federal-Mogul on January 9, 2004. Additional information was also received by DEQ on April 8, 2004 and June 10, 2004 in support of this application. Upon review of the Title V renewal application and supporting documentation by DEQ, it was determined that several revisions were required because the Title V renewal application did not reflect the approved operating scenarios for the facility.

The DEQ conducted an inspection of the facility on June 8, 2004. Based on the results of this inspection, DEQ issued a Notice of Violation on July 12, 2004. Specifically, the inspection revealed that the facility had relocated two (2) bandsaws (Ref. G7-ST-SAW1 and G7-ST-SAW2) that existed at the plant prior to 1972 but were not utilized in the G7 process area and were not connected to the fabric filter (Ref. PCD27). In addition to this change, the facility was also utilizing "drop boxes" (55-gallon drums designed to collect large particles) (Ref. PCD27D1 and PCD27D2) in conjunction with the fabric filter when operating the two (2) bandsaws.

In response to the NOV, Federal-Mogul submitted a minor NSR application on August 19, 2004 for changes to the G7 process area. The G7 process area was previously permitted on October 8, 1998. The DEQ issued a significant amendment to this permit on September 20, 2004 to reflect the changes.

The remaining changes to the facility were determined to be administrative in nature. The plant has recently removed many pieces of equipment. This action resulted in changes to the equipment grouping and numbering system at the plant. The facility has prepared a redline/strikeout version of the previous Title V permit. This document is provided for reference in Attachment D. It is important to note that the remaining G6 process area applicable requirements have been moved to Section X of the Title V permit renewal because the vast majority of previous applicable requirements for this equipment referenced a Binks spray booth and fabric filter which have been removed from service at the facility.

During preparation of the Title V renewal, Federal-Mogul submitted a second NSR permit application for changes to portions of the brake manufacturing facility. These changes were approved under a minor NSR permit dated December 22, 2004 and have been incorporated in the Title V permit renewal. A copy of this permit is provided in Attachment B. It is important to note that this permit superseded the permit issued on September 20, 2004. The modifications included the following:

- The replacement of four existing unpermitted preforms (Ref. G2-ST-PR5, G2-ST-PR7, G2-ST-PR8, and G2-ST-PR9) with a Direct Fill Machine (Ref. G2-ST-PS46) that will be controlled by an

existing fabric filter (PCD18, PCD21, PCD22 or PCD23).

- Replacement of an existing drill (Ref. G3-ST-DR3) with a new drill (Ref. G3-ST-DR15) that will be controlled by an existing fabric filter (PCD1 – PCD5, PCD7, PCD8 or PCD24).

- Addition of a new chamfer (Ref. G3-ST-GR24) that will be controlled by an existing fabric filter (PCD1 – PCD5, PCD7, PCD8 or PCD24).

The State Air Pollution Control Board took final action and approved the establishment of emission control areas and Reasonably Available Control Technology (RACT) requirements for Winchester and Frederick County. These changes to the State Regulations for the Control and Abatement of Air Pollution, which became effective March 24, 2004, require presumptive RACT for selected volatile organic compound (VOC) sources. However, the facility notified DEQ on 3/31/2004 that it is not subject to any of the requirements of 9 VAC 5 Chapter 40. Therefore, no changes to the permit were necessary as a result of the implementation of the RACT rules in this area.

The Title V permit also includes placeholder language for two MACT Standards as described below:

- *40 CFR Part 63 Subpart QQQQQ (Friction Materials Manufacturing Facilities NESHAP)* - Each existing solvent mixer at a friction materials manufacturing facility which uses a solvent in their mixer that contains one or more HAP as an ingredient to the friction material composition shall comply no later than October 18, 2005. An affected source is an existing source if its construction began before October 4, 2001. A new or reconstructed affected source with an initial start up date on or after October 4, 2001, but before October 18, 2002, must be in compliance by October 18, 2002. A new or reconstructed source with an initial start up date after October 18, 2002 must be in compliance upon initial start up. An affected source is considered reconstructed if it meets definition of “reconstruction" in 40 CFR 63.2.

- *40 CFR Part 63 Subpart DDDDD (Industrial/Commercial/Institutional Boilers and Process Heater NESHAP)* – The facility shall comply no later than three years after the date of final rule publication in the Federal Register (September 13, 2007). New industrial boilers and process heaters must comply with the final rule when they are brought on line. New units have up to six months after the rule is final, or six months after startup, whichever is later, to demonstrate compliance with 40 CFR Part 63 Subpart DDDDD.

Lastly, the general conditions in the permit have been updated to reflect changes to boilerplate language.

COMPLIANCE STATUS

The brake part manufacturing facility is inspected once a year. The facility was last inspected on June 8, 2004. The facility is currently in compliance with applicable requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Table I. Significant Emission Units.

Emission Unit	Stack ID	Machine ID	PCD ID	PCD Description	Size/Rate Capacity	Pollutant Controlled	Applicable Permit Date
Compounding (G1) (4 Wetline lodgies, 5 Dryline lodgies, 3 Weigh stations, 3 Saws, 2 Preforms, 1 Press)							
G1	6-P56C	G1-CO-WL1 - WL3 G1-CO-WS3 G1-CO-GR1	6	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm	2.3 tons/hr	PM/PM10	2/6/79 (Trim Grinder (G1-CO-GR1))
	19-P34	G1-CO-WL4 G1-CO-DL1-DL5 G1-CO-WS1 - WS2	19	Pulse Jet Fabric Filter Micro Pul 221S10TRH 20,000 cfm			
	20-P35	G1-BL-SAW1 - SAW3 G1-BL-PR1 - PR2 G1-BL-PS1	20	Pulse Jet Fabric Filter Micro Pul 221S10TRH 20,000 cfm			
Preforming Process (G2) (32 Preforms, 2 Grinders, 1 Saw, 72 Presses, 20 Ovens, 5 Mill Rolls)							
G2	18-P3	G2-BL-PR1 - PR7	18	Pulse Jet Fabric Filter Micro Pul 221S10TRH 20,000 cfm	2.3 tons/hr	PM/PM10	12/22/04 (Direct Fill Machine G2-ST-PS46)
	21-P33	G2-BL-PR8 - PR12	21	Pulse Jet Fabric Filter Micro Pul 221S10TRH 20,000 cfm			
	22-P6A	G2-ST-PR1 - PR9 G2-ST-PS46	22	Pulse Jet Fabric Filter Micro Pul 255S1020TRH 24,000 cfm			
	23-P6B	G2-ST-PR10 - PR20 G2-ST-GR1 G2-ST-GR2	23	Pulse Jet Fabric Filter Micro Pul 255S1020TRH 24,000 cfm			

Emission Unit	Stack ID	Machine ID G2-ST-SAW1	PCD ID	PCD Description	Size/Rate Capacity	Pollutant Controlled	Applicable Permit Date
G2	P30, P78-P93 P96-P101	G2-BL-PS1 - PS28 G2-ST-PS1 - PS44 G2-RL-ML1 - ML5			2.3 tons/hr	PM/PM10	
	FB6-FB14, FB16-FB19, FB23(1&2), FB53(1&2), FB54-FB56, FB85, FB101	G2-DB-OV1 - OV3 G2-BL-OV2 G2-ST-OV1 - OV16					
Finishing Process (G3) (42 Grinders, 9 Saws, 31 Drills)							
G3	1-P55A	G3-ST-GR1 -GR6	1	Pulse Jet Fabric Filter Pulse Clean 180-10 20,000 cfm	2.3 tons/hr	PM/PM10	12/22/04 (drill (G3-ST-DR15) and chamfer (G3-ST-GR24))
	2-P56A	G3-ST-GR7 - GR9 G3-ST-SAW1 G3-ST-DR1 - DR12 G3-ST-DR15	2	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm			
	3-P56B	G3-ST-SAW2 - SAW7 G3-ST-GR10 - GR19 G3-ST-GR24	3	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm			
	4-P55B	G3-ST-GR1 G3-ST-GR20 - GR23 G3-ST-DR13 - DR14	4	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm			
	5-P57A	G3-BL-DR1 - DR2	5	Pulse Jet Fabric Filter			

Emission Unit	Stack ID	Machine ID G3-BL-GR1 - GR2	PCD ID	PCD Description Carborundum 216M10HP1 20,000 cfm	Size/Rate Capacity	Pollutant Controlled	Applicable Permit Date
G3	7-P57B	G3-BL-GR3 - GR8 G3-BL-DR3 - DR4	7	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm	2.3 tons/hr	PM/PM10	12/22/04 (drill (G3-ST-DR15) and chamfer (G3-ST-GR24))
	8-P58A	G3-BL-GR9 - GR14 G3-BL-SAW1	8	Pulse Jet Fabric Filter Carborundum 216M10HP1 20,000 cfm			
	24-P42	G3-BL-DR5 - DR17 G3-BL-GR15 - GR23 G3-BL-SAW2	24	Pulse Jet Fabric Filter Mikropul 255S1020THR 20,000 cfm			
Fuel Burning Equipment (G4)							
G4	FB1	Keeler Steam Boiler			39.8 MMBTU/HR		
	FB79	Clayton Steam Generator			12.5 MMBTU/HR		
Pelletizing Process (G5)							
G5	25-P76	Fabric Filter Dust Pelletizing Plant	25	Pulse Jet Fabric Filter Mikropul 81S1020TR 6,000 cfm	0.70 Tons/HR	PM/PM10	
Process Materials, Printing, and Adhesives (G6) (6 Videojet Units, 12 Printers, 2 PC Lines)							
G6	Various building vents and process stacks	G6-BL-VJ1 - VJ6 G6-ST-PT1 - PT12 G6-ST-PC1 G6-ST-PC2					

Emission Unit	Stack ID	Machine ID	PCD ID	PCD Description	Size/Rate Capacity	Pollutant Controlled	Applicable Permit Date
1998 Expansion (G7) (5 Preforms, 2 Saws, 1 Grinder)							
G7	27 - P95	G7-ST-PR28 G7-ST-PR29 G7-ST-PR30 G7-ST-PR31 G7-ST-PR32	27	Pulse Jet FabricFilter 25,000 cfm	0.99 tons brake compound per hour	PM/PM10	12/22/04
	27 – P95	G7-ST-SAW1	27 & 27D1	Pulse Jet Fabric Filter 25,000 cfm Drop Boxes (2)	0.99 tons brake compound per hour	PM/PM10	
		G7-ST-SAW2	27 & 27D2				
		G7-ST-GR1	27				

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement

EMISSIONS INVENTORY

A copy of the 2003 annual emission inventory is attached as Attachment A. Emissions are summarized in the following tables.

Table II. 2003 Actual Criteria Pollutant Emissions for the Brake Part Manufacturing Facility.

Criteria Pollutant Emission in Tons/Year				
VOC	CO	SO_2	PM-10	NO_x
60.88	3.90	0.02	2.82	4.64

Table III. 2003 Actual Hazardous Air Pollutant Emissions for the Brake Part Manufacturing Facility.

Pollutant	Hazardous Air Pollutant Emission in Tons/Year
non-VOC/non-PM HAPs	21.28

EMISSION UNIT APPLICABLE REQUIREMENTS
Keeler Boiler (Ref. FB1)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-900 - Particulate matter emission limit for fuel burning installations as determined by the equation $E = 1.0906H^{-0.2594}$, where E is the emission limit in lbs/MMBTU and H is the total capacity in MMBTU/hr. The limit is 0.42 lbs/MMBTU based on the Keeler Boiler rated heat input of 39.8 MMBTU/hr.

9 VAC 5-40-930 - Sulfur dioxide limit for fuel burning installations as determined by the equation S = 2.64K, where S is the emission limit in lbs/hr and K is the heat input at total capacity in MMBTU/hr. The limit is 105 lbs/hr.

9 VAC 5-40-940 - Visible emission limit for existing fuel burning equipment.

As authorized by 9 VAC 5-80-110, the boiler fuel is limited to natural gas to demonstrate compliance with the particulate matter, sulfur dioxide, and visible emission limits.

Monitoring and Recordkeeping

The permittee shall maintain fuel purchase records for the facility to demonstrate compliance with the particulate matter, sulfur dioxide, visible emission, and fuel use limitations. There is reasonable assurance that violations of the emission limitations should not occur if only natural gas, the permitted fuel, is burned in the boiler. Estimated particulate and sulfur dioxide emissions based on AP-42 natural gas emission factors are compared to the respective limits:

Pollutant	Limitation	AP-42 Emission Rate
PM/PM-10	0.42 lbs/MMBTU	0.01 lbs/MMBTU
SO_2	105 lbs/hr	0.024 lbs/hr

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to the boiler is required.

Streamlined Requirements

There are no streamlined requirements for the boiler.

EMISSION UNIT APPLICABLE REQUIREMENTS
Clayton Steam Generator (Ref. FB79)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 - Visible emission limit for new sources.

The boiler fuel is limited to natural gas to demonstrate compliance with the above visible emission limit as authorized by 9 VAC 5-80-110.

Monitoring and Recordkeeping

The permittee shall monitor daily natural gas use for the boiler as required by New Source Performance Standards in 40 CFR 60, Subpart Dc and 9 VAC 5-50-410. Fuel use monitoring also provides reasonable assurance of compliance with the visible emission limit.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to the boiler is required.

Streamlined Requirements

There are no streamlined requirements for the boiler.

EMISSION UNIT APPLICABLE REQUIREMENTS
Compounding (Ref. G1)

Limitations

A State BACT visible emission limitation in Condition 3 of the minor New Source Review Permit (NSR Permit) for the compounding (G1) grinder, issued on February 6, 1979, is applicable:

Condition 3 - Requires no visible emissions from the compounding grinder stack.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-260 - Particulate matter process weight limit for process units apply to the compounding equipment. The limit is determined by the equation $E = 4.10P^{0.67}$, where E is the particulate limit in pounds per hour and P is the process weight limit in tons per hour.

As authorized by 9 VAC 5-80-110, the facility is required to control emissions via a fabric filter and perform operation and maintenance to minimize the duration and frequency of excess emission. This will in provide reasonable assurance of compliance with the particulate matter emission limitations of 9 VAC 5-40-260.

Monitoring and Recordkeeping

The permit requires operation of fabric filters to demonstrate compliance with the particulate matter process weight limit and visible emission requirements. Properly operating fabric filters are expected to comply with both the particulate matter process weight limit and the no visible emissions limit from the fabric filter exhausts.

For example, the pelletizer treatment plant (G5) control device (PCD25), receives the heaviest particulate loading of any fabric filter at the plant, receiving all of the dust collected by the other fabric filters. Applying the process weight rule to the pelletizer treatment plant (G5) results in an hourly limit of 3.24 lbs/hr at the maximum capacity of 0.7 tons/hr. A fabric filter can achieve an outlet concentration of 0.01 gr/cf (a number of NSPS standards which are met by fabric filters are required to achieve concentrations of 0.01 gr/dscf or less). The fabric filter controlling the pelletizer treatment plant has an exhaust rate of 6000 cfm. An outlet concentration of 0.01 gr/cf at 6000 cfm equals 0.51 lbs/hr, which is in compliance with the 3.24 lbs/hr limit.

Due to the fact that the compounding grinder may be rotated between the any of the fabric filters in the G1 process area, the standard of no visible emissions shall apply to all of these fabric filter exhausts in this area. A review of the historical inspections of the facility has demonstrated that visible emissions have not been seen from the G1 fabric filter exhausts. The permit also contains a requirement for the facility to take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions. These measures include a maintenance schedule and an inventory of spare parts.

Additionally, the permittee will inspect the fabric filters on a daily basis. The inspection will include a determination of the presence of a visible emissions, and an observation of the pressure drop across the filter. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. The presence of visible emissions require that the permittee take timely corrective action to return the fabric filter to operation with no visible emissions. A log recording the results of the inspection including pressure drop, presence of visible emissions, and any maintenance or corrective action taken, shall be kept.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if other testing is performed. The Department and EPA have authority to require testing not included in

this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to G1 is required.

Streamlined Requirements

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The visible emission limitations in 9 VAC 5-40-940 and 9 VAC 5-50-80 have not been included for the G1 process area because the permit limit of no visible emissions from the fabric filter exhausts is more stringent than the regulatory limit of twenty percent (20%) opacity, except for one six-minute period in any one hour not to exceed thirty percent (30% - new sources) and sixty percent (60% - existing sources).

EMISSION UNIT APPLICABLE REQUIREMENTS
Preforming (Ref. G2)

Limitations

The following limitations are from the minor NSR permit issued on December 22, 2004. Please note that the condition numbers are from the December 2004 permit; a copy of the permit is enclosed as Attachment B.

Condition 4 -	Particulate matter emissions from the Block and H&P presses (Ref. G2-BL-PR1-PR7, G2-BL-PR8-PR12, G2-ST-PR1-PR9 and G2-ST-PR10-PR20), Direct Fill Machine (Ref. G2-ST-PS46), grinders (Ref. G2-ST-GR1 and G2-ST-GR2) and saw (Ref. G2-ST-SAW1) shall be controlled by fabric filters (Ref. PCD18, PCD21, PCD22 and PCD23).
Condition 10 -	Visible emissions from the fabric filter exhausts (Stack Ref. 18-P3, 21-P33, 22-P6A and 23-P6B) shall not exceed five percent (5%) opacity.
Condition 16 -	Authorization requirements to install and operate the Direct Fill Machine (Ref. G2-ST-PS46).
Condition 19 -	The permittee shall take measures in order to minimize the duration and

frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-260 - Particulate matter process weight limit for process units apply to the preforming equipment. The limit is determined by the equation $E = 4.10P^{0.67}$, where E is the particulate limit in pounds per hour and P is the process weight limit in tons per hour.

9 VAC 5-50-80 - Visible emissions from the exhausts for the cure presses and Roll Mill machines (Stack Ref. P30, P78-P93 and P96-P101) and cure ovens (Stack Ref. FB6-FB14, FB16-FB19, FB23(1&2), FB53(1&2), FB54-FB56, FB85 and FB101) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

9 VAC 5-40-280 - Sulfur dioxide emissions from the Ross Conveyor Cure Ovens (Ref. FB23-1 and FB23-2) shall not exceed 87 pounds per hour. The limit for the installation (both combined) is determined by the equation S = 2.64K, where S is the emission limit in lbs/hr and K is the heat input at total capacity in MMBTU/hr. The limit is 87 lbs/hr at the total heat input of 33 MMBTU/hr.

As authorized by 9 VAC 5-80-110, the preforming cure ovens are limited to natural gas to demonstrate compliance with the particulate matter, visible emission, and sulfur dioxide emission limits.

Monitoring and Recordkeeping

The permittee shall maintain fuel purchase records for the facility to demonstrate compliance with the sulfur dioxide and fuel use limitations. Violations of the sulfur dioxide limitations for the Ross Conveyor Ovens should not occur if only natural gas is burned. Estimated Ross Conveyor Ovens sulfur dioxide emissions based on AP-42 natural gas emission factors are compared to the respective limits:

Pollutant	Limitation	AP-42 Emission Rate
SO_2	87 lbs/hr	0.020 lbs/hr

The permit requires operation of fabric filters to demonstrate compliance with the particulate matter

process weight limit and visible emission requirements. Properly operating fabric filters are expected to comply with both the particulate matter process weight limit and the 5 percent opacity limit from the fabric filter exhausts.

For example, the pelletizer treatment plant (G5) control device (PCD25), receives the heaviest particulate loading of any fabric filter at the plant, receiving all of the dust collected by the other fabric filters. Applying the process weight rule to the pelletizer treatment plant (G5) results in an hourly limit of 3.24 lbs/hr at the maximum capacity of 0.7 tons/hr. A fabric filter can achieve an outlet concentration of 0.01 gr/cf (a number of NSPS standards which are met by fabric filters are required to achieve concentrations of 0.01 gr/dscf or less). The fabric filter controlling the pelletizer treatment plant has an exhaust rate of 6000 cfm. An outlet concentration of 0.01 gr/cf at 6000 cfm equals 0.51 lbs/hr, which is in compliance with the 3.24 lbs/hr limit.

Due to the fact that the Direct Fill Machine (Ref. G2-ST-PS46) may be rotated between the any of the fabric filters in the G2 process area, the standard of 5 percent opacity shall apply to all of these fabric filter exhausts in this area. A review of the historical inspections of the facility has demonstrated that visible emissions have not been seen from the G2 fabric filter exhausts. The permit also contains a requirement for the facility to take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions. These measures include a maintenance schedule and an inventory of spare parts.

Additionally, the permittee will inspect the fabric filters on a daily basis. The inspection will include a determination of the presence of a visible emissions, and an observation of the pressure drop across the filter. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. The presence of visible emissions require that the permittee take timely corrective action to return the fabric filter to operation with no visible emissions. A log recording the results of the inspection including pressure drop, presence of visible emissions, and any maintenance or corrective action taken, shall be kept.

The permittee will also perform a weekly visible emission survey of uncontrolled performing stacks. The survey will include a determination of the presence of visible emissions. The presence of visible emissions from a stack require recording the date, time, stack ID, and process operation conditions (compound mixture, resin, temperature, etc.), and an EPA Method 9 visible emission evaluation if visible emissions were observed from the stack during a previous survey.

Testing

Condition 7 of the December 22, 2004 minor NSR permit is incorporated into the Title V permit. Specifically, the facility is required to construct the facility so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the

appropriate locations.

The permit does not require source tests. A table of test methods has been included in the permit if other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Federal-Mogul is required to furnish written notification to the Department of the actual start-up date of the Direct Fill Machine (Ref. G2-ST-PS46) within 15 days after such date. No additional reporting specific to G2 is required.

Streamlined Requirements

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The visible emission limitations in 9 VAC 5-40-80 and 9 VAC 5-50-80 have not been included for the G2 process area (with the exception of fuel burning equipment) because the permit limit of 5 percent opacity from the fabric filter exhausts is more stringent than the regulatory limit of twenty percent (20%) opacity, except for one six-minute period in any one hour not to exceed thirty percent (30% - new sources) and sixty percent (60% - existing sources). The permit limit for the fuel burning equipment is based on 9 VAC 5-50-80 and is more stringent than the existing source limit of twenty percent (20%) except for one six-minute period in any one hour not to exceed thirty percent sixty percent (60% - existing sources).

EMISSION UNIT APPLICABLE REQUIREMENTS
Finishing (Ref. G3)

Limitations

The following limitations are from the minor NSR permit issued on December 22, 2004. Please note that the condition numbers are from the December 2004 permit; a copy of the permit is enclosed as Attachment B.

Condition 5 -	Particulate matter emissions from the drill (Ref. G3-ST-DR15) and the chamfer (Ref. G3-ST-GR24) shall each be controlled by a fabric (PCD1 – PCD5, PCD7, PCD8 or PCD24).
Condition 10 -	Visible emissions from the fabric filter exhausts (Stack Ref. 1-P55A, 2-P56A, 3-P56B, 4-P55B, 5-P57A, 7-P57B, 8-P58A and 24-P42)

shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

Condition 16 - Authorization requirements to install and operate the drill (Ref. G3-ST-DR15) and chamfer (Ref. G3-ST-GR24).

Condition 19 - The permittee shall take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-260 - Particulate matter process weight limit for process units apply to the preforming equipment. The limit is determined by the equation $E = 4.10P^{0.67}$, where E is the particulate limit in pounds per hour and P is the process weight limit in tons per hour.

Monitoring and Recordkeeping

The permit requires operation of fabric filters to demonstrate compliance with the particulate matter process weight limit and visible emission requirements. Properly operating fabric filters are expected to comply with both the particulate matter process weight limit and the 5 percent opacity limit from the fabric filter exhausts.

For example, the pelletizer treatment plant (G5) control device (PCD25), receives the heaviest particulate loading of any fabric filter at the plant, receiving all of the dust collected by the other fabric filters. Applying the process weight rule to the pelletizer treatment plant (G5) results in an hourly limit of 3.24 lbs/hr at the maximum capacity of 0.7 tons/hr. A fabric filter can achieve an outlet concentration of 0.01 gr/cf (a number of NSPS standards which are met by fabric filters are required to achieve concentrations of 0.01 gr/dscf or less). The fabric filter controlling the pelletizer treatment plant has an exhaust rate of 6000 cfm. An outlet concentration of 0.01 gr/cf at 6000 cfm equals 0.51 lbs/hr, which is in compliance with the 3.24 lbs/hr limit.

Due to the fact that the drill (Ref. G3-ST-DR15) and chamfer (Ref. G3-ST-GR24) may be rotated between the any of the fabric filters in the G3 process area, the standard of 5 percent opacity shall apply to all of these fabric filter exhausts in this area. A review of the historical inspections of the facility has demonstrated that visible emissions have not been seen from the G3 fabric filter exhausts. The permit also contains a requirement for the facility to take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions. These measures include a maintenance schedule and an

inventory of spare parts.

Additionally, the permittee will inspect the fabric filters on a daily basis. The inspection will include a determination of the presence of a visible emissions, and an observation of the pressure drop across the filter. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. The presence of visible emissions require that the permittee take timely corrective action to return the fabric filter to operation with no visible emissions. A log recording the results of the inspection including pressure drop, presence of visible emissions, and any maintenance or corrective action taken, shall be kept.

Testing

Condition 7 of the December 22, 2004 minor NSR permit is incorporated into the Title V permit. Specifically, the facility is required to construct the facility so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

The permit does not require source tests. A table of test methods has been included in the permit if other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Federal-Mogul is required to furnish written notification to the Department of the actual start-up date of the drill (Ref. G3-ST-DR15) and chamfer (Ref. G3-ST-GR24) within 15 days after such date. No additional reporting specific to G2 is required.

Streamlined Requirements

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The visible emission limitations in 9 VAC 5-40-80 and 9 VAC 5-50-80 have not been included for the G3 process area because the permit limit of 5 percent opacity from the fabric filter exhausts is more stringent than the regulatory limit of twenty percent (20%) opacity, except for one six-minute period in any one hour not to exceed thirty percent (30% - new sources) and sixty percent (60% - existing sources).

EMISSION UNIT APPLICABLE REQUIREMENTS
Pelletizer Treatment Plant (Ref. G5)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-260 -	Particulate matter process weight limit for process units apply to the preforming equipment. The limit is determined by the equation $E = 4.10P^{0.67}$, where E is the particulate limit in pounds per hour and P is the process weight limit in tons per hour.
9 VAC 5-50-80 -	Particulate matter emissions from the pelletizer treatment plant (Ref. G5) shall be controlled by fabric filter (Ref. PCD25).

As authorized by 9 VAC 5-80-110, the preforming cure ovens are limited to natural gas to demonstrate compliance with the particulate matter, visible emission, and sulfur dioxide emission limits.

Monitoring and Recordkeeping

The permit requires operation of fabric filters to demonstrate compliance with the particulate matter process weight limit and visible emission requirements. Properly operating fabric filters are expected to comply with both the particulate matter process weight limit and the 5 percent opacity limit from the fabric filter exhausts.

The pelletizer treatment plant (G5) control device (PCD25), receives the heaviest particulate loading of any fabric filter at the plant, receiving all of the dust collected by the other fabric filters. Applying the process weight rule to the pelletizer treatment plant (G5) results in an hourly limit of 3.24 lbs/hr at the maximum capacity of 0.7 tons/hr. A fabric filter can achieve an outlet concentration of 0.01 gr/cf (a number of NSPS standards which are met by fabric filters are required to achieve concentrations of 0.01 gr/dscf or less). The fabric filter controlling the pelletizer treatment plant has an exhaust rate of 6000 cfm. An outlet concentration of 0.01 gr/cf at 6000 cfm equals 0.51 lbs/hr, which is in compliance with the 3.24 lbs/hr limit.

A review of the historical inspections of the facility has demonstrated that visible emissions have not been seen from the G5 fabric filter exhaust. The permit also contains a requirement for the facility to take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions. These measures include a maintenance schedule and an inventory of spare parts.

Additionally, the permittee will inspect the fabric filter on a daily basis. The inspection will include a determination of the presence of a visible emissions, and an observation of the pressure drop across the

filter. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. The presence of visible emissions require that the permittee take timely corrective action to return the fabric filter to operation with no visible emissions. A log recording the results of the inspection including pressure drop, presence of visible emissions, and any maintenance or corrective action taken, shall be kept.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to G5 is required.

Streamlined Requirements

9 VAC 5-40-80, Existing Source Standard for Visible Emissions

The visible emission limitations in 9 VAC 5-40-80 has not been included for the G5 process area because the permit limit the new source regulatory limit of twenty percent (20%) opacity, except for one six-minute period in any one hour not to exceed thirty percent (30% - new sources) is more stringent.

EMISSION UNIT APPLICABLE REQUIREMENTS
1998 Expansion (Ref. G7)

Limitations

The following limitations are from the minor NSR permit issued on December 22, 2004. Please note that the condition numbers are from the December 2004 permit; a copy of the permit is enclosed as Attachment B.

Condition 3 - Particulate matter emissions from the preforming and finishing equipment (Ref. G7-ST-SAW1 and G7-ST-SAW2, G7-ST-PR28 through G7-ST-PR32 and G7-ST-GR1) shall be controlled by a fabric filter (PCD 27). Drop boxes (Ref. PCD27D1 and PCD27D2) shall be used in conjunction with the fabric filter when operating the two (2) bandsaws (Ref. G7-ST-SAW1 and G7-ST-SAW2).

Condition 8 - The annual brake compound throughput to the preforming and finishing equipment (Ref. G7-ST-SAW1 and G7-ST-SAW2, G7-ST-PR28

through G7-ST-PR32 and G7-ST-GR1) shall not exceed 4942 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 9 - Emissions from the preforming and finishing equipment (Ref. G7-ST-SAW1 and G7-ST-SAW2, G7-ST-PR28 through G7-ST-PR32 and G7-ST-GR1) shall not exceed 2.0 lbs/hr and 8.8 tons/yr of PM and PM-10.

Condition 10 - Visible emissions from the preforming and finishing equipment exhaust stack (Stack Ref. 27-P95) shall not exceed 5% opacity.

Condition 19 - The permittee shall take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions.

Monitoring and Recordkeeping

The permit requires operation of fabric filters to demonstrate compliance with the particulate matter process weight limit and visible emission requirements. A properly operating fabric filter is expected to comply with both the particulate matter process weight limit and the 5 percent opacity limit from the fabric filter exhaust.

The 2.0 lbs/hr and 8.8 tons/yr particulate matter emission limits in Condition 9 of the NSR permit were based on a fabric filter outlet concentration of 0.01 gr/cf and fabric filter flow rate of 25,000 cfm. Ensuring proper operation of the fabric filter assures compliance with the limits. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. A review of the historical inspections of the facility has demonstrated that visible emissions have not been seen from the G7 fabric filter exhaust. The permit also contains a requirement for the facility to take measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions. These measures include a maintenance schedule and an inventory of spare parts.

Additionally, the permittee will inspect the fabric filter on a daily basis. The inspection will include a determination of the presence of a visible emissions, and an observation of the pressure drop across the filter. A properly operating fabric filter controlling emissions from the brake manufacturing operations is expected to have no visible emissions. The presence of visible emissions require that the permittee take timely corrective action to return the fabric filter to operation with no visible emissions. A log recording the results of the inspection including pressure drop, presence of visible emissions, and any maintenance or corrective action taken, shall be kept.

Condition IX.B.3 of the Title V permit requires records of monthly and annual throughput of brake compound to the preforming and finishing equipment (Ref. G7-ST-SAW1 and G7-ST-SAW2, G7-ST-PR28 through G7-ST-PR32 and G7-ST-GR1). These records provide reasonable assurance of compliance with the throughput limit in the permit.

Testing

Condition 7 of the December 22, 2004 minor NSR permit is incorporated into the Title V permit. Specifically, the facility is required to construct the facility so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

The permit does not require source tests. A table of test methods has been included in the permit if other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to G7 is required.

Streamlined Requirements

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The visible emission limitations in 9 VAC 5-40-80 and 9 VAC 5-50-80 have not been included for the G7 process area because the permit limit of 5 percent opacity from the fabric filter exhausts is more stringent than the regulatory limit of twenty percent (20%) opacity, except for one six-minute period in any one hour not to exceed thirty percent (30% - new sources) and sixty percent (60% - existing sources).

FACILITY WIDE REQUIREMENTS (includes Ref. G6)

Limitations

There are no specific facility-wide applicable emission requirements. The previous requirement to operate dry paint filters to demonstrate compliance with the Binks Spray Booth visible emission requirement (9 VAC 5-50-80 - Visible emission limit for new sources) has been removed since the paint booth is no longer in operation at the facility.

Monitoring and Recordkeeping

The permittee will monitor and record each organic process material, printing ink, coating, adhesive and solvent for emission inventory and fee purposes. There is no need for monthly compilation of the information. VOC content records may consist of Method 24 results, VOC data sheet, or MSDS sheet.

Testing

A table of test methods has been included in the permit if future testing is required. The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting has been included in the permit for the facility-wide section of the Title V permit.

Streamlined Requirements

No specific streamlined requirements have been included in the permit for the facility-wide section of the Title V permit.

Compliance Assurance Monitoring (CAM) Plan Applicability

The CAM plan does not apply to any of the emission units at this facility. CAM applies to each emissions unit meeting all of the following criteria at a major source required to obtain a Title V permit:

- emits or has the potential to emit (in the absence of add-on control devices) quantities of one or more regulated air pollutants that exceed major source thresholds;
- is subject to one or more emission limitations for the regulated air pollutant(s) for which it is major before control; and
- uses a control device to achieve compliance with one or more of these emission limitations.

Based on information provided by the applicant, no emission unit exceeds the major source threshold before controls. Therefore, CAM does not apply.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes that have specific requirements only enforceable by the State have been identified as applicable by the applicant:

9 VAC 5-50-140, Odorous Emissions

These requirements have been streamlined from the permit because they are not specific and the exclusion of these general state requirements from a Title V permit do not diminish the enforcement authority of DEQ.

FUTURE APPLICABLE REQUIREMENTS

The Title V permit also includes placeholder language for two MACT Standards as described below:

- *40 CFR Part 63 Subpart QQQQQ (Friction Materials Manufacturing Facilities NESHAP)* - Each existing solvent mixer at a friction materials manufacturing facility which uses a solvent in their mixer that contains one or more HAP as an ingredient to the friction material composition shall comply no later than October 18, 2005. An affected source is an existing source if its construction began before October 4, 2001. A new or reconstructed affected source with an initial start up date on or after October 4, 2001, but before October 18, 2002, must be in compliance by October 18, 2002. A new or reconstructed source with an initial start up date after October 18, 2002 must be in compliance upon initial start up. An affected source is considered reconstructed if it meets definition of “reconstruction" in 40 CFR 63.2.

- *40 CFR Part 63 Subpart DDDDD (Industrial/Commercial/Institutional Boilers and Process Heater NESHAP)* – The facility shall comply no later than three years after the date of final rule publication in the Federal Register (September 13, 2007). New industrial boilers and process heaters must comply with the final rule when they are brought on line. New units have up to six months after the rule is final, or six months after startup, whichever is later, to demonstrate compliance with 40 CFR Part 63 Subpart DDDDD.

INAPPLICABLE REQUIREMENTS

The permittee has not identified any inapplicable requirements in the permit application.

The Department has determined that the following requirements are not applicable:

- The MACT standard for halogenated solvent cleaning in 40 CFR Part 63 Subpart T, and 9 VAC 5 Chapter 60, are not currently applicable. The facility does not use any halogenated cleaning solvents.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
FB3, FB65-FB66	Reznor Gas Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB28-FB29 FB33, FB98	Dravo Counterflow Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB34, FB78 FB60-FB61 FB90-FB96	Modine Gas Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB35	American Standard Boiler	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB36-FB47 FB57-FB58	Dravo Direct Flow Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB52, FB77 FB70-FB73	Carrier Gas Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB74-FB76	Aerovent Gas Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB80-FB82, FB84	Hot Water Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB86-FB89, FB97	Hastings Direct Fired Heaters	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
FB99-FB100	Heat Pumps	9 VAC 5-80-720 C	-	<10 MMBTU/HR burning natural gas
P1, P2	Product Cooling Booth	9 VAC 5-80-720 B	VOC	-
P12	Resin Drum Warming Oven	9 VAC 5-80-720 B	VOC	-
P51	Compactor	9 VAC 5-80-720 B	PM	-
P53	Tool Room	9 VAC 5-80-720 B	PM	-
P54	Pilot Plant	9 VAC 5-80-720 B	PM	-
P90, P91	Heat Exhaustors	9 VAC 5-80-720 B	VOC	-
P94	Bondomatic	9 VAC 5-80-720 B	VOC	-

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

COMPLIANCE PLAN

Federal-Mogul is currently in compliance with all applicable requirements. No compliance plan was included in the application or in the permit.

CONFIDENTIAL INFORMATION

Federal-Mogul did not submit a request for confidentiality. Therefore, all portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in the Winchester Star newspaper, Winchester, Virginia, on January 21, 2005. All persons on the Title V mailing list were sent a copy of the public notice by either e-mail on January 20, 2005 or by mail on January 21, 2005. Public comments were accepted from January 21, 2005 to February 20, 2005. No comments were received from the public regarding the draft permit and a public hearing was not required. (It should be noted that a general air quality complaint was received in the Central Office of the DEQ by e-mail on February 20, 2005 and has been directed to the Valley Regional Office Air Compliance staff.

The affected states of West Virginia and Maryland were notified of the public notice by e-mail on January 20, 2005 and the affected state of Pennsylvania was notified by mail on January 21, 2005. No comments were received from the affected states regarding the draft permit.

EPA was notified of the public notice and sent a copy of the draft permit on January 19, 2005. The 45-day EPA review period expired on March 7, 2005 with no comments received.

ATTACHMENT A

2003 Annual Emissions Update

ATTACHMENT B

Minor NSR Permits
(December 12, 1974)
(February 6, 1979)
(December 22, 2004)

ATTACHMENT C

VOC Data Sheet

ATTACHMENT D

Title V Redline/Strikeout Permit